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10/784,866	02/23/2004	Darren R. Schmidt	5150-81401	9484

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EXAMINER

KAWSAR, ABDULLAH AL

ART UNIT	PAPER NUMBER
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2195

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/784,866

Applicant(s)

SCHMIDT ET AL.

Examiner

Abdullah-Al Kawsar

Art Unit

2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/24/2004, 09/13/2006.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

1. Claims 1-30 are pending.

Priority

2. Applicant's claim for the benefit of a prior-filed provisional application is acknowledged. This application is a non-provisional application of provisional application 60/477388, filed 06/10/2003. Therefore, the effective filing date of the application is 06/10/2003.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-27, 29 and 30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

5. Claims 1-27 and 30 are medium claims that is not limited to tangible embodiments, instead being defined in the specification page 12, lines 27-28 and page 13 lines 11-15, including both tangible embodiments (e.g. computer system memory or random access memory such as DRAM, DDR RAM, SRAM, EDO RAM, Rambus RAM, etc.; or a non-volatile memory such as a magnetic media, e.g., a hard drive, or optical storage) and intangible embodiments (e.g. electrical, electromagnetic, or digital signals). Applicant is suggested to

amend the claim, the “medium” with “storage medium/memory medium”. Appropriate correction is required.

6. Claim 26 is a carrier medium claim which included intangible embodiments (e.g. electrical, electromagnetic, or digital signals) as described in specification page 13, lines 13-15. Applicant is suggested to amend the claim, the “carrier medium” with “storage medium/memory medium” or cancel the claim. Appropriate correction is required.

7. Claim 29 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In claim 29, the preamble claimed “system”, is software per se, as it is not tangibly embodied on any sort of physical medium. The claim recite “means initiating”, “means setting”, “means determining”, wherein these “means” limitations are described as being software in the specification. Applicant is suggested to amend the claim including “a storage medium” or “processor”. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. The following language are not clearly understood:

- i. Claim 1, lines 1 recite "medium configured" it is unclear how a medium is configured (i.e. storing on the medium?). lines 5 recite "initiating a timeout process" it is unclear how and when the process is being initiated. Line 6 recite "configuring a timeout event" it is not clear how the event is being configured (i.e. based on specific number of CPU cycle? or execution time?).
- ii. Claims 18, 20, 28, 29 and 30 has similar deficiency as claim 1.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-8, 14-20 and 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borkenhagen et al.(Borkenhagen) US Patent No. 6076157, in view of Fuchs et al.(Fuchs) US Patent No. 5530802.

12. As per claim 1, Borkenhagen teaches the invention substantially as claimed including a medium configured to perform time-bounded execution of a program, wherein the medium is configured to perform (col 5, lines 31-35):

initiating a timed program execution process, wherein the timed program execution process is operable to execute a program in a time-bounded manner (abstract, lines 7-12);
initiating a timeout process(col 5, lines 45-51);

configuring a timeout event(col 5, lines 58-66);

the timed program execution process performing a time-bounded execution of the program(col 5, lines 31-35), comprising:

b) if the timeout event has not occurred, executing the program, wherein, during said executing, if the timeout event occurs (col 5, lines 66-67 through col 6, lines 1-4),

e) performing a program exit procedure (col 16, lines 22-27);

disabling the timeout event (col 16, lines 1-3);

terminating the timeout process (col 16, lines 22-24); and

terminating the timed program execution process(col 17, lines 2-15).

13. Borkenhagen does not specifically disclose a) determining and storing a rollback state for the program; c) the timeout process setting the timed program execution process to the rollback state, and disabling the timeout event; and d) the timed program execution process resuming executing the program based on the rollback state with a timeout condition.

14. However, Fuchs teaches determining and storing a rollback state for the program (col 2, lines 51-56);

c) the timeout process setting the timed program execution process to the rollback state, and disabling the timeout event (col 3, lines 24-30); and

d) the timed program execution process resuming executing the program based on the rollback state with a timeout condition(col 3, lines 30-34).

15. It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Fuchs into the method of Borkenhagen to have application execution with rollback state for any failure. The modification would have been obvious because one of the ordinary skills of the art would want to be able to utilize the CPU performance by using the rollback state or any application that has failed or timeout for any event.

16. As per claim 2, Fuchs teaches e) further comprises: clearing the rollback state (col 27, lines 21-30).

17. As per claim 3, Borkenhagen teaches the medium is further configured to perform: iteratively performing said time-bounded execution of a plurality of programs (col 5, lines 58-67 through col 6, lines 1-17).

18. As per claim 4, Borkenhagen teaches said iteratively performing comprises: for each of the plurality of programs, performing a) through e) (col 5, lines 10-14; col 6, lines 1-7).

19. As per claim 5, Borkenhagen teaches wherein e) further comprises: if the timeout event has occurred, storing an indication of a timeout condition (abstract, lines 7-12); and
wherein the timed program execution process performing a time-bounded execution of the program comprises: performing a) through e) if the timeout condition is not indicated (abstract, lines 9-15).

20. As per claim 6, Borkenhagen teaches the medium is further configured to iteratively perform:

setting a timeout event(col 5, lines 58-66);

the timed program execution process performing a time-bounded execution of the program (abstract, lines 7-12); and

disabling the timeout event(col 16, lines 1-3).

21. As per claim 7, Borkenhagen teaches wherein the timeout process executes at a first priority level, and wherein the medium is further configured to perform(abstract, lines 15-18):

setting an execution priority level of the timed program execution process to a second priority level, wherein the second priority level is below the first priority level (col 10, lines 51-54).

22. As per claim 8, Borkenhagen teaches said performing a time-bounded execution of the program further comprises:

storing an original execution priority level of the timed program execution process prior to said setting the execution priority level of the timed program execution process (col 10, lines 19-25); and

wherein e) further comprises: restoring the execution priority level of the timed program execution process to the original execution priority level (col 19, lines 25-41).

23. As per claim 14, Borkenhagen teaches said initiating the timeout process is performed during said executing (col5, lines 58-63).
24. As per claim 15, Borkenhagen teaches the program comprises one or more sub-programs(col 5, lines 41-45); and
wherein b) further comprises: performing a) through e) for each of the one or more sub-programs (col 5, lines 58-67 through col 6, lines 1-18).
25. As per claim 16, Borkenhagen teaches said initiating the timeout process is performed by the timed program execution process (abstract, lines 7-12; col5, lines 58-63).
26. As per claim 17, Fuchs teaches the rollback state comprises: a rollback point, comprising an execution point in the program, and an execution state of the timed program execution process at the rollback point (col 2, lines 57-67).
27. As per claim 19, Borkenhagen teaches j) further comprises e)(col 16, lines 22-27).
28. As per claims 18 and 20, they have similar limitations as of claim 1 above. Therefore, they are rejected under the same rational as of claim 1 above.
29. As per claim 22, Borkenhagen and Fuchs do not specifically teach the program comprises a machine vision application.

30. It would have been obvious to one of the ordinary skill in the art at the time of the invention to have the application program as machine vision application to monitor the system execution and behavior.

31. As per claim 23, Borkenhagen teaches the program comprises a numerical analysis application (col 1, lines 54-60).

32. As per claim 24, Borkenhagen and Fuchs do not specifically teach the program comprises a text-based program.

33. It would have been obvious to one of the ordinary skill in the art at the time of the invention to have the application program as text based program to be able to modify the program steps with command.

34. As per claim 25, Borkenhagen and Fuchs do not specifically teach the program comprises a graphical program.

35. It would have been obvious to one of the ordinary skill in the art at the time of the invention to have the application program as graphical program with graphical interface to utilize the user friendly program layout method.

36. As per claim 26, Borkenhagen teaches the medium comprises a carrier medium (col 1, lines 44-49).

37. As per claim 27, Borkenhagen teaches the medium comprises a programmable hardware element (col 1, lines 49-52).

38. As per claim 28-30, they have similar limitations of claim 1 above. Therefore, they are rejected under the same rational as of claim 1 above.

39. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Borkenhagen et al.(Borkenhagen) US Patent No. 6076157, in view of Fuchs et al.(Fuchs) US Patent No. 5530802, and further in view of Chamberlain (Chamberlin) US Patent No. 6438749.

40. As per claim 21, Borkenhagen and Fuchs does not specifically disclose receiving a disable request from the program to disable the rollback state; disabling the rollback state in response to said disable request; receiving an enable request from the program to enable the rollback state; enabling the rollback state in response to said enable request; and updating the rollback state for the program.

41. However, Chamberlain teaches wherein said executing the program further comprises(c: receiving a disable request from the program to disable the rollback state (col 16, lines 16-28);

disabling the rollback state in response to said disable request (col 16, lines 37-42);
receiving an enable request from the program to enable the rollback state (col 3, lines 1-2);
enabling the rollback state in response to said enable request (col 3, lines 9-12); and
updating the rollback state for the program (col 15, lines 65-67 through col 16, lines 1-5).

42. It would have been obvious to a person of ordinary skill in art at the time of invention was made to incorporate the teaching of Chamberlin in to the combined method of Fuchs and Borkenhagen to be able to enable or disable rollback option on any application. The modification would have been obvious because one of the ordinary skills of the art would want to be able to enable or disable rollback options on a system when the system to be able to bypass a critical halt or not having enough resources for rollback state.

Allowable Subject Matter

43. Claims 9-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to overcome the rejections(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this office action and including all of the limitations of the base claim and any intervening claims.

Conclusion

44. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdullah-Al Kawsar whose telephone number is 571-270-3169. The examiner can normally be reached on 7:30am to 5:00pm, EST.

45. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng Ai T. An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

46. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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